

Percent Word Problems

Quadir made \$150 in tips from all his tables. His total sales was \$880 for the night, what percent did he earn from all his customers?

Proportion Method

$$P = B \cdot R$$

$$150 = 880 \cdot R$$

$$\frac{150}{880} = R$$

Simplify Numerically:

$$0.17$$

Proportion Method

x	150	Tip
100	880	Sales

$$\frac{x}{100} = \frac{150}{880}$$

$$100 \cdot \frac{x}{100} = \frac{150}{880} \cdot 100$$

$$x = 17$$

Quadir made 17% commission on sales.

Percent Word Problems

Ishmael found a great sale 45% off on new sneakers that originally cost \$125.00? How much did he pay for the sneakers?

Proportion Method

$$P = B \cdot R$$

$$P = (125) \cdot (0.45)$$

$$P = 56.25$$

Proportion Method

45	x	Discount
100	125	Sneakers \$

$$\frac{45}{100} = \frac{x}{125}$$

$$125 \cdot \frac{45}{100} = \frac{x}{125} \cdot 125$$

$$56.25 = x$$

Ishmael received a discount of \$56.25. He paid
\$125.00 - \$56.25 = \$68.75 (Price Decrease)

Alternate Solution

$$\frac{45}{100} = \frac{x}{125}$$

45% off on new sneakers that originally cost \$125.00?
How much did he pay for the sneakers?

That proportion solves for the discount, x . Then you must subtract this amount from the original price.

Ishmael received a discount of \$56.25. He paid
 $\$125.00 - \$56.25 = \$68.75$ (Price Decrease)

The difference $100\% - 45\% = 55\%$ is the percent paid by Ishmael.

Revising the proportion $\frac{100 - 45}{100} = \frac{x}{125}$ solves for the sales price directly.

$$\frac{55}{100} = \frac{x}{125}$$

$$x = 68.75$$

x is the price Ishmael paid for the sneakers \$68.75